

## **Futures Forum Economic Competitiveness: Aligning Higher Education and Workforce Needs**

**Sponsored by the Council on Virginia's Future  
Friday, August 28, 2009  
Richmond, VA**

**9:00 a.m. – 11:00 a.m.**

Forum Overview: The meeting was designed to engage a small group of thought leaders in a discussion about opportunities to enhance the alignment of higher education with emerging workforce needs. A list of attendees is provided at the end of this summary.

### **Introduction**

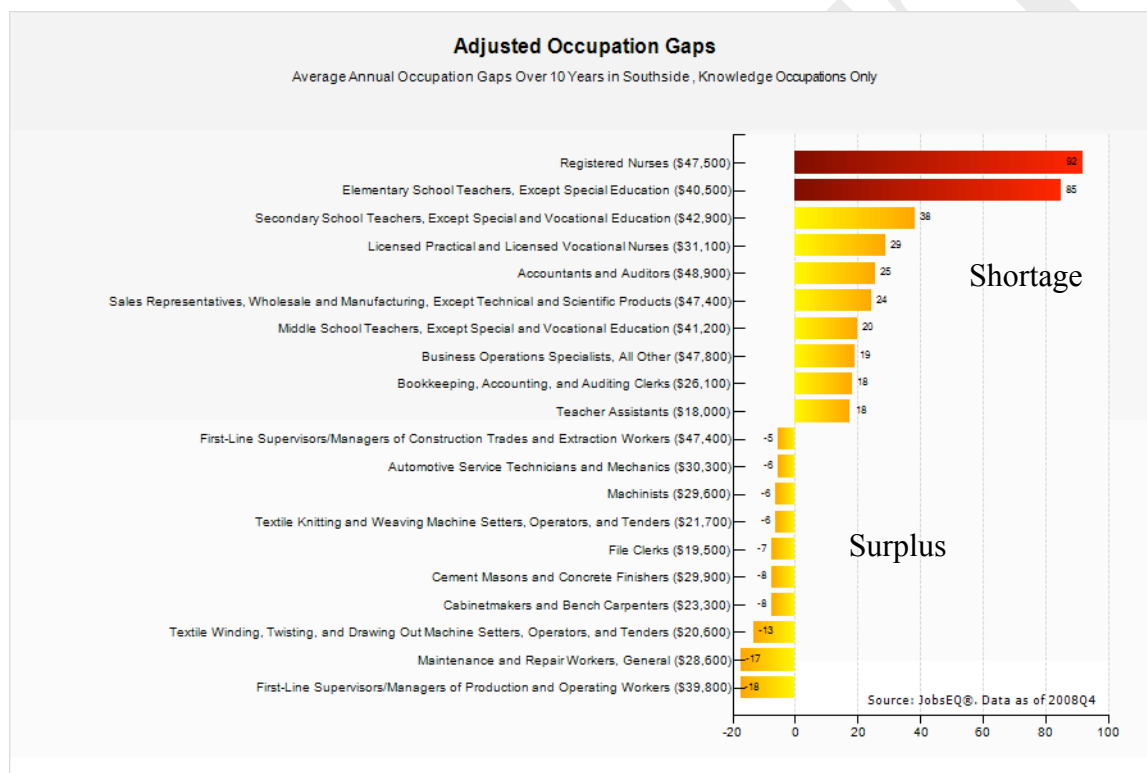
- Jane Kusiak welcomed forum attendees. Ms. Kusiak noted that the Council helps ensure Virginia's long-term prosperity and quality of life by creating an environment for improved policy-making and increased government accountability and performance. One of the Council's important roles is to help the Commonwealth maintain a long-term focus on critical issues. In particular, the Council has long focused on the close relationship between educational attainment and economic competitiveness and prosperity.
- Work to date on the Council's education initiative has focused on documenting the current state of educational attainment-related issues in Virginia and on the development of a model by the National Center for Higher Education Management Systems to analyze strategic alternatives for improving performance along Virginia's education pipeline. This series of forums is an important priority over the next few months. Potential additional forum topics include:
  - College Readiness
  - Retention and Graduation
  - Finances and Productivity
  - Timely and Efficient Student Completion
  - Affordability and Access
- Ms. Kusiak introduced the presenters and response panel:
  - Chris Chmura, Ph.D., President and Chief Economist, Chmura Economics & Analytics
  - M. Craig Herndon, Ph.D., Director of Career and Educational Resources, Virginia Community College System
  - Patrick Kelly, Senior Associate, National Center of Higher Education Management Systems.

## Enhancing the Alignment of Higher Education with Long-term Workforce Needs

- Dr. Chmura's presentation focused on these questions:
  - Is there misalignment in the state?
  - Why is it important?
  - How does misalignment occur?
  - Are other states doing a better job?
  - Can/should Virginia change?

### Is there misalignment in the state?

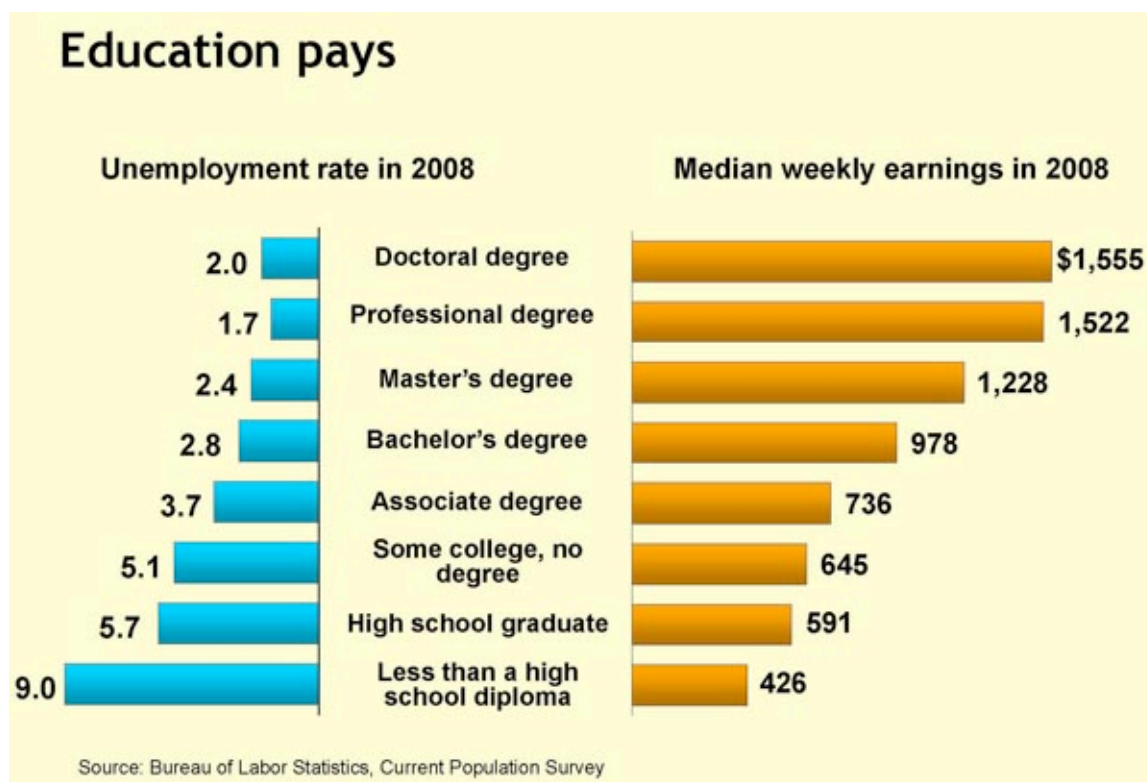
- Misalignment exists but varies by region of the state. The chart below summarizes projected occupation gaps for the Southside region.



### Why is it important?

- Alignment and education are important because:
  - Individual earnings typically rise and unemployment rates fall with increasing educational attainment.
  - Education improves regional growth and competitiveness.
  - Misalignment is costly to individuals and to society.

- There are strong correlations at the national and state levels between educational attainment and incomes. The correlation is less direct but consistent at a locality level.



Discussion: Is there proof that this relationship implies that higher educational attainment drives economic growth and job creation?

- There are a number of factors important for economic growth, including quality of life issues, advanced infrastructure, the availability of capital and so forth. However, the relationship between education and economic growth is compelling and has been growing. The correlation between educational attainment and national or state incomes has strengthened considerably over the past two decades.
- Rolls Royce's decision to locate in Prince George was driven in part by the current and projected (based on commitments made by the education and workforce communities) skill and educational attainment levels in the region. Rolls Royce will bring in educated workers and provide growing opportunities for skilled workers from the region to stay in the region. Thus, existing and projected education levels made economic growth possible and, at the same time, job expansion will drive enhanced education levels in the region. Improvements in educational attainment and job growth are closely interrelated.

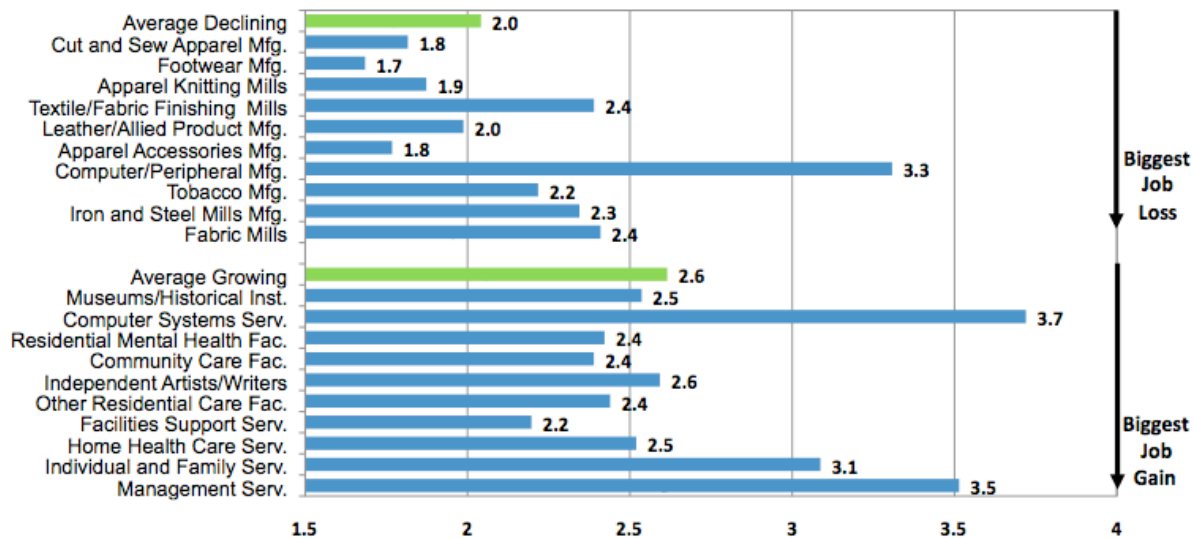
### Why is There Misalignment?

- Four key reasons:
  - Uncontrollable factors:
    - Industry churn – especially changes in industry mix over the long-term; for instance the long-term decline of manufacturing and rise of professional and technical service jobs.
    - Skill requirements are increasing within industries.

- More controllable:
  - Lack of good information about future workforce opportunities and requirements.
  - Lack of policies to emphasize/facilitate better alignment between education and workforce needs.

Discussion: Interaction between industry and skill mix requirements.

- Industry is demanding higher skilled workers in order to remain competitive in a global economy. For instance, manufacturing jobs are declining overall, but within the industry, the demand for highly skilled workers is increasing from more advanced, high-tech, high-productivity manufacturing firms.
- In general, as demonstrated in the following chart, higher skills are needed for faster growing service industries. (Note: Skill rankings are reported in O\*Net, an occupational data system maintained by the U.S. Bureau of Labor Statistics)



- It is important to distinguish between industry and occupational growth. In one region the emphasis on producing additional nurses led to increasing the number of Licensed Practical Nurses, which did not match the actual need for increased Registered Nurses. In addition, regional industry growth can mask significant declines in specific occupations. For example, demand for computer programmers is declining while the demand for more advanced network, systems and data communications analysts is increasing in Northern Virginia.
- Responsiveness to misalignment can also be slowed by local policies. Dr. Chmura cited an example of a policy of one Workforce Investment Board (WIB) that delayed training opportunities that might have led to high-need job opportunities. This policy was revised when information on the issue was presented to the WIB.

Discussion: Accuracy and appropriateness of job forecasts.

- Forecasts for emerging workforce skill needs at the statewide or metro area level are more accurate than at the locality level. Changing economic conditions will also affect forecast accuracy; the impact of the current economic contraction will be significant. Despite this variability, forecasts can help inform student decision-making.

- Major policy changes or economic development projects can have significant impacts on the adequacy of forecasts. For instance, relocations to Virginia from the federal base realignment and closure (BRAC) decisions will add more than 1,500 jobs annually to Northern Virginia and new policies and programs to foster growth of the “green” economy are projected to add an additional 2,073 jobs per year. The concomitant growth in federal contractor jobs could add yet another 4,185 jobs per year. The investment decisions by Rolls Royce (Prince George) and Northrop Grumman/CGI (Southwest) will have major impacts on those areas.

Annual Occupation Demand Projection - Northern Virginia Sub-region						
Occupations Groups	Baseline	BRAC Effect	Environ-Mental Effect	Defense Contractor Effect	Annual Total Demand	Annual Growth Rate
Architecture and engineering	2,648	391	157	639	3,836	4.5%
Arts, design, entertainment, sports, media	1,844	47	44	70	2,006	3.6%
Building and grounds cleaning, maintenance	4,879	12	29	19	4,939	3.4%
Business and financial operations	6,802	117	333	310	7,562	3.6%
Community and social services	2,078	8	64	1	2,152	3.9%
Computer and mathematical science	8,596	166	157	836	9,755	4.8%
Construction and extraction	5,770	38	96	329	6,232	3.7%
Education, training, and library	7,334	7	25	5	7,370	3.8%
Farming, fishing, and forestry	104	3	12	1	120	3.1%
Food preparation and serving related	12,659	4	20	0	12,682	4.6%
Health care practitioners and technical	5,001	29	43	96	5,169	3.7%
Health care support	2,565	6	8	89	2,668	3.7%
Installation, maintenance, and repair	3,791	53	55	145	4,045	3.2%
Legal	1,201	1	48	4	1,254	2.7%
Life, physical, and social science	1,796	49	97	179	2,122	4.2%
Management	5,845	71	135	238	6,289	3.4%
Office and administrative support	17,929	164	320	562	18,975	3.1%
Personal care and service	4,224	5	54	28	4,312	4.3%
Production	1,854	24	95	338	2,311	2.7%
Protective service	5,123	336	159	13	5,632	4.2%
Sales and related	13,694	23	42	206	13,964	4.2%
Transportation and material moving	5,689	11	79	75	5,854	3.4%
<b>Total</b>	<b>121,426</b>	<b>1,565</b>	<b>2,073</b>	<b>4,185</b>	<b>129,249</b>	<b>3.7%</b>

Source: Chmura Economics & Analytics

- It is desirable to have industry leaders involved at the regional and state level. In general, existing industry has a good handle on their longer-term workforce needs.
- Economic and other factors can also come in to play in hard-to-predict ways. The economic downturn has led many nurses in Northern Virginia to remain in the workforce, thus mitigating the region’s nursing shortage. If job prospects for spouses strengthen, more nurses might decide to leave the workforce or cut back on hours worked.

### Are other states doing a better job?

- Patrick Kelly cited Yuma, AZ as doing a good job at responding to a nursing shortage; production of nursing degrees increased, but the problems were not eliminated because many young nurses were migrating to Phoenix. He also mentioned that the apparent marketplace gap for teachers persists not because too few new teachers graduate each year, but because too many teachers are leaving the profession – the key issue is retention, not the production of teaching degrees.
- Dr. Chmura presented examples suggesting that other states face similar misalignment issues. It is unclear if other states are deploying effective strategic initiatives to close workforce gaps.

## Virginia Education Wizard

- Craig Herndon provided a brief demonstration of the Virginia Education Wizard ([www.vawizard.org/vccs](http://www.vawizard.org/vccs)). This web data tool helps students identify potential careers and to better understand what is required for those careers. The site includes information needed to compare costs across colleges and to obtain financial aid. Information on transfer agreements between two- and four-year colleges and help on applying to a two-year college are also provided.
- The Education Wizard will support the Department of Education's new requirements for students to begin developing career plans in the 7th grade. It will also play a role in the Commonwealth's evolving Career Pathways program.
- Other points:
  - Plans are underway to significantly expand the wizard to include four-year institutions and proprietary schools, along with more information about certificates and apprenticeship opportunities.
  - Data in the Wizard is updated frequently, but the exact schedule depends on how often the data change and become available.

## Discussion

### Does Virginia need change?

Discussion issue: role of the state in relation to students and localities/regions.

- The point was made that we don't live in a command-and-control economy; student choice plays a critical role. Course offerings and curricula are heavily influenced by student demand. It would not make sense for the state to pay for courses that industry might want but that students will not take. Conversely, students sometimes demand courses for occupations with surplus workers. For instance, the demand for forensics courses has increased dramatically (the CSI effect) without a corresponding growth in forensics jobs.
- Affecting student demand is not a simple issue. More and better information might not always lead to better results. We need to analyze job gaps more carefully. If gaps persist, it might be that those careers are not in demand and are not very attractive alternatives for students.
- In certain cases – especially for entry-level workers – 'soft' skills such as adaptability, comprehension, and interpersonal dynamics can be more important than specific hard skills that can be taught on the job. At higher levels of educational attainment, it is important to foster entrepreneurship and leadership – traits that are essential for driving economic growth. A skilled engineer can fill a job and help a company grow; an entrepreneurial engineer can create a regional economic growth engine.
- Given issues with the reliability of forecasts, it is important to move carefully, being more aggressive in developing and promoting programs only where the level of confidence in future need is greatest. In addition, Virginia needs a strategy to leapfrog forward economically. A strategy intended to meet gradually evolving workforce needs might not be optimal. Virginia



should ‘pick its spots carefully’ based on a thorough analysis of current competitive strengths, assets, and opportunities. A policy of stronger alignment might best be developed in conjunction with a strategic focus on specific industry clusters.

- Current state influence appears limited. For instance, high school counselors focus on academics, not careers. Higher education tends to focus more on a liberal education than a career-oriented one. The state’s ability to influence alignment might be limited because we lack the means to provide appropriate incentives or insist on complete accountability: a significant portion of the Commonwealth’s spending on education is passed on to others without strong accountability mechanisms in place.
- In terms of broad workforce issues, Virginia is doing a better job of breaking down operational silos. Progress has been greater at the state level through the Governor’s sub-cabinet on workforce development and through concentration of workforce development responsibilities within the Virginia Community College System.
- Issues remain at the service delivery level, however. Virginia is opening its first workforce one-stop in Roanoke. A number of issues, including factors limiting customer focus and inter-organizational collaboration, made the service consolidation a more difficult process than expected. However, the National Governors Association and the U.S. Department of Labor view Virginia as a model state.
- Role of incentives
  - The state did offer incentives recently to increase the number of nursing degrees, but funding for the program was discontinued.
  - It appears that incentives aimed at students can be effective.
- Other points:
  - Accountability for higher education quality and student outcomes should be strengthened.
  - Aggressive and visible leadership is needed from the Governor.
  - Strategic focus is critical, and stronger leadership is needed at the state level in order to push real changes in higher education, including more collaboration, better use of technology, and increased productivity. Issues related to alignment should be considered within the broader context of an overall change strategy for higher education.

## Forum Attendees

**Frank B. Atkinson**

Chairman, McGuireWoods Consulting LLP

**Peter A. Blake**

Vice Chancellor, Workforce Development Services,  
Virginia Community College System

**The Honorable Richard D. Brown**

Secretary of Finance

**Achsah H. Carrier**

Research Associate, Demographics and Workforce,  
Weldon Cooper Center for Public Service, UVa.

**Christine Chmura**

President and Chief Economist, Chmura Economics  
& Analytics

**Whittington W. Clement**

Member, State Council of Higher Education for  
Virginia; Partner, Hunton & Williams

**Betsey Daley**

Staff Director, Senate Finance Committee

**Thomas D. Daley**

Deputy Director, State Council of Higher Education  
for Virginia

**Joseph G. DeFilippo**

Director, Academic Affairs and Planning, State  
Council of Higher Education for Virginia

**Jo Lynne DeMary**

Director, Center for School Improvement, School of  
Education, Virginia Commonwealth University

**Donald J. Finley**

President, Virginia Business Higher Education  
Council

**M. Craig Herndon**

Director, Career & Educational Resources, Virginia  
Community College System

**April Kees**

Legislative Analyst, Senate Finance Committee

**Patrick J. Kelly**

Senior Associate and Director, NCHEMS  
National Information Center, National Center for  
Higher Education Management Systems

**H. Lane Kneedler**

Partner, Reed Smith, LLP

**Jane N. Kusiak**

Executive Director, Council on Virginia's Future

**Robert P. Leber**

Director, Education and Workforce Development,  
Northrop Grumman Corp.; Chair, Virginia  
Workforce Council

**Daniel G. LeBlanc**

Senior Advisor to the Governor for Workforce

**DAnthony A. Maggio**

Legislative Fiscal Analyst, House Appropriations  
Committee

**The Honorable Thomas R. Morris**

Secretary of Education

**Liz Povar**

Director, Business Development, Virginia  
Economic Development Partnership

**John P. Thomas**

Director, Weldon Cooper Center for Public  
Service, UVa.

**Daniel S. Timberlake**

Director, Department of Planning and Budget

**Paul W. Timmreck**

Director, Virginia Executive Institute,  
Performance Management Group, Virginia  
Commonwealth University

**Sonya R. Waddell**

Associate Research Economist, Federal Reserve  
Bank of Richmond

**John O. "Dubby" Wynne**

Vice Chair, Council on Virginia's Future